Remarks

The pending rejections cannot be maintained because the '922 reference does not teach or suggest aspects of the claimed invention including, for example, those directed to forming a compound of a metal layer and a further semiconductor material, with the compound including at least a substantial portion of the further semiconductor region.

The Office Action dated October 20, 2008 listed the following rejections: claims 1, 2 and 10 stand rejected under § 102(b) over Wang (U.S. Patent No. 6,074,922); claims 3-7 and 9 stand rejected under § 103(a) over Wang in view of Hashimoto (U.S. Pub. No. 2001/0003056); and claim 8 stands rejected under § 103(a) over Wang in view of Wu (U.S. Patent No. 6,348,390). Applicant respectfully traverses each rejection and averment in this Office Action.

More specifically, the § 102(b) rejection and the § 103(a) rejections (each of which is based on the '922 reference) are improper. The cited portions of the '922 reference do not correspond to the limitations as in the last clause of claim 1. Instead, the '922 reference teaches that silicide 42 (*i.e.,* the Examiner's alleged compound) is formed on top of polysilicon gate 16 (*i.e.,* the Examiner's alleged further semiconductor material) from titanium layer 40 (*i.e.,* the Examiner's alleged metal layer). *See, e.g.,* Figures 6-7 and Col. 3:59 to Col. 4:15. As such, the cited portions of the '922 reference do not correspond to the claimed invention. Accordingly, the § 102(b) rejection of claims 1, 2 and 10 and the § 103(a) rejections of claims 3-9 are improper and Applicant requests that they be withdrawn.

Applicant further traverses the § 103(a) rejection of claim 3 because the skilled artisan would not be motivated to modify the '922 reference in the manner proposed by the Examiner. Applicant has twice previously presented arguments regarding the impropriety of the Examiner's proposed modification of the '922 reference (*see* the RCE filed on February 4, 2008 and the Response filed on August 5, 2008), to which the Examiner has failed to respond in any manner. *See, e.g.,* M.P.E.P. § 707.07(f) ("Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it."). Applicant submits that the Examiner, in the instant Office Action, continues to improperly repeat the § 103(a) rejection of claim 3 without responding to the substance of Applicant's

previous arguments. Thus, Applicant submits that the record is uncontroverted that the Examiner's proposed combination of the '922 and '056 references is improper and, as such, the rejection of claim 3 cannot be maintained. *See, e.g.,* M.P.E.P. § 706.07 ("The examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal."). The following discussion particularly addresses the impropriety of the Examiner's proposed combination of the '922 and '056 references.

Claim 3 sets forth that the "further semiconductor region is completely consumed during the formation of the compound of the metal layer and the further semiconductor material". In contrast, Wang transforms the titanium layer 40 into titanium silicide 42 while avoiding transformation or consumption of its gate electrode 16. *See, e.g.,* Figures 6-7 and Col. Col. 3:59 to Col. 4:15. Apparently recognizing this issue, the Examiner proposes that the prior art would lead a skilled artisan to modify the teaching of the '922 reference by the '056 reference's teaching that, for a certain embodiment in the '056 reference, the'056 reference's gate can be consumed as part of its semiconductor manufacturing process.

Applicant disagrees and submits that the skilled artisan would not be motivated to implement such a modification of the '922 reference in part because the modification attempts to solve a problem that is not present in the cited embodiment and because the modification drastically alters the entire process and structure taught by the '922 reference. In this and other regards, the '922 reference clearly teaches away from this modification proposed by the Office Action. *See, e.g.,* M.P.E.P. § 2145. As is well-established (before and after the KSR decision), such a rejection is improper because the proposed modification would undermine the main objective and embodiment of the '922 reference and/or is based on an attempt to solve a problem that is not present in (and not needing to be addressed by) the '922 reference.

Moreover, a main objective of the '922 reference is to form a metal silicide on the top surface of the gate electrode in order to solve the resistance degradation problem for narrow polysilicon lines caused by salicide non-uniformity (discussed in the background section of the '922 reference and at Col. 4:12-14). Accordingly, the rejection violates M.P.E.P. § 2143.01. *See also In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir.

1984) (A §103 rejection cannot be maintained when the asserted modification undermines purpose of main reference.). In addition, Applicant submits that modifying the '922 reference in the manner proposed by the Examiner (*i.e.,* such that gate electrode 16 is completely consumed) is further improper because it changes the principal operation of the '922 reference. *See, e.g.,* M.P.E.P. § 2143.01 ("If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)").

In view of the above, there is no motivation for the skilled artisan to modify the '922 reference in the manner proposed by the Examiner. Accordingly, the § 103(a) rejection of claim 3 is improper and Applicant requests that it be withdrawn.

Applicant further traverses the § 103(a) rejection of claim 8 because the Office Action fails to provide an adequate reason why the skilled artisan would modify the'922 reference with the cited teachings of the '390 reference. This approach is contrary to the requirements of § 103 and relevant law. *See, e.g., KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007) ("A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art."). Applicant previously presented arguments regarding the impropriety of the Examiner's proposed modification of the '922 reference in regard to claim 8 (*see* the Response filed on August 5, 2008), to which the Examiner has failed to respond as required in the instant Office Action. *See, e.g.,* M.P.E.P. §§ 707.07(f) and 706.07 discussed above. Applicant submits that the Examiner, in the instant Office Action, has improperly maintained the § 103(a) rejection of claim 8 without responding to the substance of Applicant's previous arguments as required. The following discussion particularly addresses the impropriety of the Examiner's proposed combination of the '922 and '390 references.

In regard to claim 8, the Examiner acknowledges that the'922 reference does not teach removing spacers 34. The Examiner then asserts that the skilled artisan would modify the'922 reference to remove the spacers 34 as taught by the'390 reference in order "to form extended source/drain regions." The '922 reference, however, already

teaches that lightly doped source and drain regions 32 (*i.e.*, extended source/drain regions) are formed prior to the formation of the spacers 34. *See, e.g.,* Figures 2-4 and Col. 3:35-36. Applicant submits that the Examiner's alleged motivation for the proposed combination is based on a nonexistent problem that has already been addressed by the '922 reference. The requirement for providing a sufficient reason to combine references has been explained in specific examples through USPTO Board decisions and, in one such decision, the USPTO Board has opined that there is no proper motivation to combine where the alleged purpose for combining is to address a problem that the prior art has already addressed. *See, e.g.,* www.iptoday.com/articles/2007-09-nowotarski.asp, which discusses numerous Board decisions in which Examiners' rejections were overturned, in view of *KSR*, due to lack of a sufficient reason to combine. Thus, as explained in such recent decisions, it is improper to combine references without any real motivation such as here, where a nonexistent problem is being addressed by the Examiner. Accordingly, the § 103(a) rejection of claim 8 is improper and Applicant requests that it be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

Please direct all correspondence to:

Corporate Patent Counsel
NXP Intellectual Property & Standards
1109 McKay Drive; Mail Stop SJ41
San Jose, CA 95131

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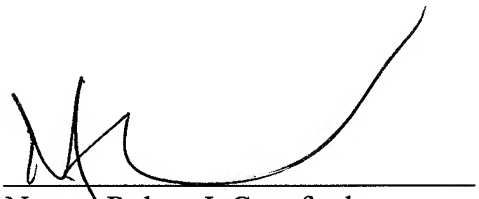
By: 

Name: Robert J. Crawford
Reg. No.: 32,122
651-686-6633 x2300
(NXPS.273PA)